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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,829	01/03/2007	Yoshihisa Doi	65341.00008	7066
32294 7590 04/29/2009 SQUIRE, SANDERS & DEMPSEY L.L.P. 8000 TOWERS CRESCENT DRIVE 14TH FLOOR VIENNA, VA 22182-6212				
EXAMINER				
WEISS, PAMELA HL				
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1797				
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04/29/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/580,829

Applicant(s)

DOI ET AL.

Examiner

PAMELA WEISS

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's arguments filed March 19, 2009 have been fully considered but they are not persuasive.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Forsberg (Re36,479) in view of Yamamoto et al (US 4,256,591).

Regarding Claim 1:

Forsberg discloses an aqueous lubricant comprising

(a) a solid inorganic lubricating agent; (molybdenum disulfide C31 L25-28)

Forsberg does not explicitly disclose the amount of molybdenum disulfide solid lubricating agent as 10 to 40% by mass.

Forsberg also discloses that the functionally effective amount of the functional additive should be present so as to impart the desired properties intended by the addition of said additive. (C32 L57-68) It is the examiner's position that the concentration of molybdenum disulfide is therefore a result effective variable because changing it will clearly affect the type of product obtained. See MPEP § 2144.05 (B). Case law holds that "discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art." See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

It therefore would have been obvious to a person having ordinary skill in the art at the time of invention to use an amount of molybdenum disulfide sufficient to provide the appropriate lubricating properties.

(b) Forsberg discloses isobutylene maleic anhydride copolymer (i.e. attaching agent having both lubricating and dispersing properties) (C27 L8) in the amount of 0.1 to about 10% by weight (C31 L4-9)

Forsberg does not explicitly disclose 2 to 20% by mass of an attaching agent having both lubricating and dispersing properties.

Forsberg discloses the amount of the attaching agent within/overlapping the claimed ranges. See MPEP 2144.05(I): "In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976);"

Forsberg et al. discloses the use of alkylene glycols (C8 L47-51) in forming a nitrogen containing salt in an aqueous composition.

Forsberg et al. does not explicitly disclose (c) 2 to 20% by mass of an agent having both wetting characteristics and moisture evaporation-accelerating actions; and water.

Yamamoto et al discloses alkylene glycols (ethylene glycol, propylene glycol, etc. C6 L25-30) as an aqueous dispersion medium.

Yamamoto et al. and Forsberg et al. are analogous because both references are directed to aqueous lubricants containing a solid lubricant and an isobutylene copolymer.

It would have been obvious to a person having ordinary skill in the art at the time of invention to use the alkylene glycol of Yamamoto et al. in an effective amount in the

aqueous lubricant of Forsberg et al. to improve the dispersion qualities of the aqueous lubricant composition.

Regarding Claim 2

Forsberg and Yamamoto disclose the limitations set forth above. Forsberg and Yamamoto also disclose the aqueous lubricant, wherein the solid lubricating agent (a) comprises molybdenum disulfide.(Forsberg C31 L25-28)

Regarding Claim 3:

Forsberg and Yamamoto disclose the limitations set forth above. Forsberg and Yamamoto also disclose the aqueous lubricant wherein the attaching agent (b) having both lubricating and dispersing properties comprises an isobutylene-maleic acid copolymer. (C27 L8)

Regarding Claim 4.

Forsberg and Yamamoto discloses the limitations set forth above. Forsberg also discloses the use of alkylene glycols (C8 L47-51) in forming a nitrogen containing salt in an aqueous composition.

Forsberg does not explicitly disclose the agent having both wetting characteristics and moisture evaporation accelerating actions comprising alkylene glycols.

Yamamoto et al discloses alkylene glycols (ethylene glycol, propylene glycol, etc. C6 L25-30) as an aqueous dispersion medium.

It would have been obvious to a person having ordinary skill in the art at the time of invention to use the alkylene glycol of Yamamoto et al. in an effective amount in the

aqueous lubricant of Forsberg et al. to improve the dispersion qualities of the aqueous lubricant composition.

Regarding Claim 5.

Forsberg and Yamamoto disclose the composition of claim 5, as discussed for claims 1-4 above.

Response to Arguments

6. Applicant's arguments filed March 19, 2009 have been fully considered but they are not persuasive. Forsberg expressly states that a functionally effective amount is a sufficient quantity of an additive to impart the desired properties intended by the addition of said additive (C32 L57-68) thus disclosing the amounts of the components to be result effective variables which can be adjusted to achieve the desired properties. Applicant's argument regarding the claimed overlapping ranges is unpersuasive. Applicant alleges criticality but do not present evidence of criticality (such as test results). The specification does not provide evidence that the claimed ranges are critical as not test results are submitted disclosing variation in performance or results by virtue of changing the amounts of each component used.

7. Forsberg discloses the use of polyols such as ethylene glycol or other polyoxyalkylene polyols as antifreeze agents in amounts to be determined by one of ordinary skill in the art to impart the desired anti freeze protection. (C33 L60-68) Forsberg also discloses that many of the ingredients described for use in making he aqueous composition are industrial products which exhibit or confer more than one

property on such aqueous composition. Thus, a single ingredient can provide several functions thereby eliminating or reducing the need for some other additional ingredient. (C34 L1-11) Forsberg discloses the use of polyethylene glycol ether in an amount of 14.7% by weight. (within the claimed range of 2 – 20% by mass).

8. Applicant's argument that Yamamoto does not use molybdenum compositions as the solid lubricant is unpersuasive. Yamamoto discloses the use of a solid lubricant as well as an additive of a copolymer of isobutylene (C7 L65-68) and ethylene glycol. While Yamamoto uses a different solid lubricant (other than molybdenum disulfide of Forsberg), the reference is presented to disclose the use of the ethylene glycol with a solid lubricant and that it is compatible with an isobutylene copolymer. Yamamoto does not teach that the isobutylene copolymer and ethylene glycol may not be used with molybdenum disulfide. Yamamoto discloses the use of the ethylene glycol as an aqueous dispersion agent suitable for use with solid lubricants and with isobutylene copolymer additives. It has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992).

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAMELA WEISS whose telephone number is (571)270-7057. The examiner can normally be reached on Mon.-Thur. 7:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn A. Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PW

/Glenn A Caldarola/
Acting SPE of Art Unit 1797